

## Claims:

1. Gas cooling device for coke oven gas that contains condensing constituents, having

a gas channel (6) through which coke oven gas flows,

heat exchanger elements through which a coolant flows, within the gas channel (6), and

a sprinkling device (2) above the heat exchanger elements,

whereby the gas-side heat exchanger surface of the heat exchanger elements is wetted with fluid that is supplied by means of the sprinkling device (2), characterized in that the heat exchanger elements are configured as cooling plates (5) through which the coolant can flow, and which are combined to form at least one heat exchanger package with channel-forming spacers (7), and that the heat exchanger package is disposed in the gas channel (6) with a vertical orientation of the cooling plates (5), whereby the liquid that exits from the sprinkling device (2) is applied to the gas channels formed by the spacers (7), and the coke-oven gas flows through these channels.

2. Gas cooling device according to claim 1, characterized in that the heat exchanger package is disposed in a vertical segment of the gas channel (6), and that the coke-oven gas flows through the heat exchanger package in the same current or counter-current to the film of liquid that runs down the heat exchanger surfaces.

3. Gas cooling device according to claim 1, characterized in that the heat exchanger package is disposed in a horizontal segment of the gas channel (6), and that the coke-oven gas flows through the heat exchanger package in a cross-current to the film of liquid that runs down the heat exchanger surfaces.

4. Gas cooling device according to claim 1 to 3, characterized in that the heat exchanger package can be inserted laterally into the gas channel (6), as a replacement unit.

5. Gas cooling device according to claim 1 to 4, characterized in that the sprinkling device (2) is installed in the gas channel (6) in fixed manner.